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" This application claims the benefit of provisional application 60/126,187 filed 3/25/99 and Provisional application 60/126,188 filed 3/25/99. //

Field of the Invention

5 The present invention relates to a tumour-associated antigen (TAA) useful for eliciting an anti-tumour immunotherapeutic response in subjects. In particular, the invention relates to 5T4 antigen and its use in immunotherapy.

Background to the Invention

10 A number of oncofoetal or tumour-associated antigens (TAAs) have been identified and characterised in human and animal tumours. In general, TAAs are antigens expressed during foetal development which are downregulated in adult cells, and are thus normally absent or present only at very low levels in adults. Tumour cells have
15 been observed to resume expression of TAAs, and the application of TAAs for tumour diagnosis, targeting and immunotherapy has therefore been suggested.

20 In particular, the recent cloning of tumour antigens recognised by T cells has caused considerable interest in the development of antigen specific cancer vaccines. However, many tumour associated antigens are non-mutated, poorly immunogenic tissue differentiation antigens. Their weak immunogenicity may be due to self tolerance. Thus they are rarely indicated as antigenic peptides suitable for raising an immune response.

25 Notwithstanding this, some tumour associated antigens are found to be regularly associated with tumours in a large number of individuals. Such antigens are especially attractive candidates for use in vaccines. They include the melanoma differentiation antigens (MDA), melanoma antigens which are recognised by T lymphocytes as well as several proteins in the MAGE family. However, as indicated by results from clinical
30 trials obtained to date, inducing therapeutic T cells to these antigens has proved extremely difficult. One reason for the apparent hyporesponsiveness of the human immune system to many tumour antigens may be that they are normal, non-mutated